

PARAGUAY

ADVANCED DEVELOPING COUNTRY (ADC) STRATEGY

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I. Background and Introduction

Since the mid 1940's the United States has assisted Paraguay's development efforts. Averaging about five million dollars a year through the 1960/1970's, the program addressed major constraints to development and strengthened government infrastructure and administration in almost every sector. Paraguay's track record of implementation and the impact of the assistance program compares very favorably with region-wide experience.

Due in part to this forty years of U.S. cooperation, the Government of Paraguay has developed the ability to attract other donor resources and to carry out development projects reasonably well. The World Bank and the IDB have active loan portfolios approaching \$800 million. The major hydroelectric ventures on the Paraná River with Brazil (Itaipu) and Argentina (Yacyreta) have provided substantial capital inflows. Other countries, particularly Japan and Germany, provide important levels of bilateral economic and/or technical cooperation. Through the UNDP, the United Nations organizations have active representations and programs. OAS and IICA also furnish technical assistance through local offices.

Paraguay enjoyed a period of unprecedented economic growth during the 1970's. The annual average growth rate of GDP in the period 1969-75 was 6.4 percent which accelerated to an impressive 10.2 percent in 1975-81. In these seven years, the total real GDP doubled.<sup>1/</sup> The driving factors behind this growth were the expansion of private sector agricultural production and export, the construction of the Itaipu hydroelectric project and, to a lesser extent, the preparatory work for the Yacyreta hydroelectric project. The new found wealth became apparent in many forms, particularly in the capital city of Asuncion.

Within this economic context, the decision was made in May of 1980 to discontinue bilateral A.I.D. development assistance to Paraguay. Fiscal year 1981 was the final year of new bilateral A.I.D. obligations and the USAID Mission was scheduled for closing at the end of FY 1984. In 1982, the Ambassador and the Country Team asked that this decision be reconsidered in light of evidence that the rural poor had not shared in the country's boom (e.g., persistent lack of access to public education in the rural sector and high drop out rates where facilities are available; continuing high rate of infant mortality and lack of access to health services and water and sanitation; and limited market opportunities for potential small farmer crops, a deteriorating land base, and inefficient production technologies.)<sup>2/</sup>

The concern was exacerbated by the fact that Paraguay's economic growth came to a sudden halt in 1982, after decelerating at the end of 1981. (Paraguay subsequently entered into a sharp recession, the effects of which are still felt.) In November 1982, a team was sent by the A.I.D. Assistant Administrator for LAC to consider the request for continuing a bilateral A.I.D. Mission. The resulting report recommended that Paraguay be included within A.I.D.'s emerging policy for Advanced Developing Countries (ADC). This approach has been agreed to by the Ambassador and the A.I.D. Administrator. As planned, the A.I.D. Mission was closed at the end of FY 1984, but replaced by an A.I.D. Development Affairs Attache to work with the Country Team in developing and implementing an ADC program strategy for Paraguay.

The two remaining active A.I.D. financed projects in Paraguay will be terminated in May and August of 1985. An A.I.D. Country Environmental Profile will be completed by mid 1985. With the exception of the A.I.D./Peace Corps Special Project Activities and participant training, any further A.I.D. activity will depend on the approval and funding of an ADC program for Paraguay. With these same exceptions, the new projects under the ADC program proposed herein will be with Paraguayan private sector organizations or U.S. PVO's. Some minor, non-project technical assistance to the GOP is also planned. Thus, the ADC program generally will not require the signature of new agreements with the present GOP administration, thereby avoiding the rekindling of expectations of a resumption of a traditional bilateral A.I.D. program.

The ADC strategy for Paraguay nevertheless must reflect the fact that the country does not enjoy the stage of institutional (private as well as public) development shared by the other three designated ADC's in the region. In order to contribute to the institution building needs, human resource development, principally through participant training, will be an important element of the ADC strategy for Paraguay. The development impact of the regionally funded participant training program will be improved and, subject to the availability of funds, expanded. There is also an opportunity for A.I.D. to play a leadership role in strengthening selected private sector Paraguayan training institutions that have the potential for becoming models and centers of excellence. Specifically, Catholic University is seeking a small A.I.D. grant to help start the country's first graduate management training curriculum. Kansas State University already has assisted with initial planning efforts under the Partners' Program. These ties will be strengthened under a proposed FY 1985 USIA university-to-university linkages grant with KSU. The A.I.D. grant will be coordinated with the USIA and Partners activities and will provide the complementary resources necessary to improve the responsiveness of the program to the needs of the private sector. Another grant is planned to the U.S. PVO Salesian Society to assist the private Salesian Agricultural Institute (IAS) improve its high school agricultural technical training in rural Paraguay. Through modest amounts of technical assistance and training, and complementing other donor efforts,

it will also be possible to promote policy and programmatic improvements in the public education sector.

Transfer of technology to the private sector will be the second element of the ADC strategy. Technology transfer activities will be targeted on agricultural productivity, micro-enterprise employment generation, agro-industries, marketing of small farmer production, and non-traditional exports in agriculture. Through a series of fairly low cost activities, linkages from Paraguayan agricultural associations, PVO's, ccoperatives, agro-enterprises, exporters and other private sector organizations to U.S. centers of expertise will be promoted in order to increase sector productivity levels. Many of these efforts will draw on existing A.I.D. arrangements with U.S. Land Grant Universities, PVO's, and other cooperators. To address the concerns of growing urban unemployment, a micro-enterprise employment generation activity will be initiated with the assistance of a U.S. PVO, Accion Internacional/AITEC. Another U.S. PVO, the International Executive Service Corps (IESC), will also receive an A.I.D. grant in order to start its program in Paraguay. IESC will use these funds to help cover costs of providing technical assistance from retired U.S. executives to private Paraguayan firms involved in agro-industry, non-traditional exports, marketing of small farmer production, and other selected activities with significant benefit incidence spread. Also, a need assessment will be carried out to determine the demand for a special effort to establish a mechanism for the retrieval and dissemination of appropriate or capital savings technology.

Finally, a small A.I.D. presence in Paraguay will facilitate the use of non-concessional USG assistance (e.g., Housing Guarantees and TDP) as opportunities arise as well as the promotion of activities of special interest to A.I.D. For Paraguay, the priorities of this latter group include: Health and Population; Environment; Women in Development; and Disaster Preparedness.

Table I presents an illustrative budget for implementing the ADC program. The responsiveness of the principal activities of the program to A.I.D.'s four programmatic principles - policy dialog, increased participation of the private sector, technology transfer, and institution building - are shown in Chart I. The rationale for an ADC strategy with the particular mix of activities described above and the details of individual activities are discussed in Section III. The following Section II provides an overview of the country specific setting for an ADC strategy.

## II. Development Prospects

### A. Economic Overview

Economically, Paraguay is considered a middle-income developing country. Gross domestic product for 1984 was approximately \$2.5 billion using a market rate of exchange. Per capita income was estimated by the Embassy at about \$700, also adjusted for the exchange rate. Real GDP

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TABLE I

ILLUSTRATIVE FINANCIAL PLAN FOR PARAGUAY  
ADC PROGRAM (IN US\$1,000's)

<u>Activity</u>	<u>FY 1985</u>	<u>FY1986</u>	<u>FY 1987</u>
I. Human Resource Development			
A. Participant Training <u>1/</u>	(300)	(300)	(400)
B. C.U. Graduate Mgt. School	100	100	150
C. IAS Ag. Training (Salesian Society)	100	150	150
D. PD&S, Education	20	30	20
II. Private Sector Technology Transfer			
A. Agricultural Productivity	50	100	100
B. Micro-Enterprise Employment Generation (Accion Internacional)	80	80	40
C. T.A. for Private Enterprise (IESC)	50	100	150
D. Peace Corps SPA <u>1/</u>	(40)	(60)	(80)
E. Appropriate Techno- logy Information Dissemination <u>2/</u>	35	Subject to needs assessment	
III. PD&S to Pursue Areas of Special A.I.D. Interests	<u>15</u>	<u>20</u>	<u>10</u>
TOTAL	450	580	620

1/ Non-Additive because funded regionally from existing regional or central programs.

2/ FY 1985 would be PD&S for a needs assessment if not financed centrally; any amount for FY 1986 and 87 would be based on results of assessment.

CHART I - ADC PROGRAM RESPONSIVENESS TO A.I.D.'S FOUR PROGRAMMATIC PRINCIPLES

	<u>POLICY DIALOG</u>	<u>PRIVATE SECTOR PARTICIPATION</u>	<u>TECHNOLOGY TRANSFER</u>	<u>INSTITUTION BUILDING</u>
<b>I. HUMAN RESOURCES DEVELOPMENT</b>				
A. Participant Training	Participant selection process vis-a-vis development priorities will be improved through better dialogue with GOP.	Private sector student loan fund will be promoted, thereby providing basis for greater involvement of private sector program.	Greater use of medium-term, non-degree training will enhance the acquisition of needed technology.	Better coordination of participant selection with other major donors will complement <u>their institution building efforts.</u>
B. Catholic University Graduate School of Business	A better basis for constructive private sector dialog with GOP will result from research conducted on private sector issues.	The improved supply of trained, responsible managers will help private sector growth.	Interaction with KSU and other centers of expertise will transfer needed know-how on graduate business teaching and research.	All project activities will contribute to the development of a new institutional capacity within Catholic University.
C. Salesian Agricultural Institute (IAS)	Improvements made in curriculum and teaching methodology applied by IAS will be demonstrated to GOP to promote replication in public schools.	Curriculum of IAS will be improved to reflect needs of agro-industries and other future employers in the private agricultural sector.	Technical assistance will improve IAS productive use of its natural resources.	IAS will have an improved flow of financial resources and a better decision making system for its financial management.
<b>II. PRIVATE SECTOR TECHNOLOGY TRANSFER</b>				
A. Agricultural Productivity Linkages	Technical assistance will help private groups to identify technical and other constraints to increased productivity and thereby better equip them to deal with sector authorities.	Private groups working in ag sector will be motivated to address productivity problems through new access to t.a.; this will promote greater self-help and reduce dependence on government solutions.	The basic focus of the project is to facilitate the flow of U.S. agricultural technology to Paraguay.	The project will include identification and strengthening of a local private sector organization to serve as program coordinator.
B. Micro Enterprise Employment Generation (Acción Internacional/AITEC)	A.I.D. and other donors will use the information generated on the scope and importance of the informal business sector to increase GOP awareness of problems faced by this group.	Financial and other support of private sector will create an expanding micro-entrepreneurial class and promote greater cohesiveness among all size groups.	Methodology for addressing micro-enterprise credit and t.a. needs will be assisted with improving their productivity through more appropriate levels of technology.	Project will bring about the financial viability of local private sector organization to serve Paraguayan micro-enterprises.
C. IESC Technical Assistance to Enterprises	Private sector service organizations, e.g., Chambers of Industry/Commerce, will be eligible for t.a. for institutional strengthening, which in turn will increase their abilities to dialogue effectively with GOP.	The project represents a new source of technical assistance for the Paraguay private sector. Significant improvements in the productivity and growth of participating Paraguayan enterprises are expected.	Through one-on-one training, each IESC volunteer provides an intensive transfer of management and technical know-how. Follow up communications after the volunteers return to the U.S. provides a continuing flow of technology transfer.	Local private sector service organizations, such as Chambers of Industry or Commerce, export promotion and technology transfer entities, will be strengthened.

rose about 4.7 percent in 1984, the first year of recovery from an especially steep economic slide that commenced in late 1981. Prior to the slump, the Paraguayan economy had been experiencing the hemisphere's most rapid rates of economic growth, thanks to expansion of agricultural production and work on the Parana River hydroelectric projects. The rise in real GDP averaged 10.8 percent annually 1976-81.

The setback experienced from mid 1981 to late 1983 was one of the steepest in the region. GNP in real terms declined an estimated 5.5 percent in 1982 and 10.4 percent in 1983. The recession has been attributed to: (a) adverse international economic conditions, particularly in neighboring Argentina and Brazil, Paraguay's principal trading partners; (b) sharp currency devaluations in Argentina and Brazil whose heretofore overvalued exchange rate policies had stimulated Paraguayan exports and tourism; (c) attenuation of capital inflows from the hydroelectric projects as Itaipu nears completion and Yacyretá is delayed; (d) two years of adverse climatic conditions with serious flooding; and (e) the Government's reluctance to make necessary domestic economic adjustments. Government sources estimate that the economy will continue to recover at a modest 4 to 5 percent rate of economic growth for the near future, especially if the pace of work on the Yacyreta hydroelectric project accelerates. Estimates of 1984 growth rates are in this range. *and then*

Paraguay has not had to renegotiate its external debts and has not had an IMF standby agreement since 1960. Nevertheless, it remains under balance of payments pressure with deficits averaging \$100 million per year 1984-85. Total foreign debt was estimated at \$2,150 by end of 1984, including public foreign debt and estimates of unregistered private obligations. Though modest, annual debt servicing of about \$225 million just for the \$1.5 billion registered public external debt, poses a burden. Private debt servicing has run into serious problems, and many obligations are not being paid.

The weakening of the country's external sector has contributed to exchange rate instability. From 1960 until 1982 the guarani had been pegged at a rate of 126 to the dollar. Since 1982 the Central Bank has attempted to cope with balance of payments problems and exchange rate instability through a complicated policy of multiple exchange rates and payments delays. The latest change in May 1984 allowed free trading in foreign exchange in addition to establishing several official exchange rate for public sector and a limited number of private sector exchange transactions. The free market, exchange rate of 400 guaranies per dollar prevailing at the end of 1984 reflects the relative scarcity of foreign exchange. Nevertheless, there are no controls on transactions in the free market.

Paraguayan economic policy generally has been favorable toward the development of the private sector. Since 1960, monetary and fiscal policies have been conservative. The economic profile of the government was kept low as the policy was to avoid encroaching into areas



susceptible to private development. This latter policy has been observed less rigorously in recent years when the success of the economic boom has opened new options to the Government in terms of foreign borrowing. Having been limited heretofore to borrowing for necessary infrastructure development, usually financed by foreign concessionary sources, the Government has tended in recent years to expand public sector involvement in the economy especially by undertaking several large, foreign financed industrial and public works projects without giving full consideration to economic feasibility. The adverse consequences of this policy shift in terms of higher foreign debt servicing, public sector deficits, and reduced private investment opportunities could contribute to the slowdown in economic growth anticipated over the next several years. 3/

B. Productive Resource Base.

Ethnically, culturally, and socially, Paraguay probably has the most homogeneous population in South America. About 95 percent of its 3.6 million inhabitants are of mixed Spanish and Guarani Indian descent. Although 18 indigenous Indian groups remain, they account for fewer than 40,000 men, women and children, and are located mainly in remote areas of the country. Little trace is left of the original Guarani culture except the language, which is understood by over 90 percent of the population and used by the rural population almost to the exclusion of Spanish.

Agriculture

With a total area of 154,047 square miles (roughly the size of California), Paraguay's favorable people/land ratio underscores the fact that agriculture is and should continue to be the mainstay of the country's development process. Agriculture provides 45 percent of total national employment and, directly and indirectly, over 95 percent of merchandise export earnings. Almost 60 percent of the population live in the rural sector. 4/ (This figure increases to two thirds when towns of less than 2,000 are considered rural). The relatively low degree of urbanization contributes to the persistence of a relatively high population growth rate considered to be 2.6 percent, using the results of the last census, but estimated by other sources to be as high as 3.0 percent.

Based on the 1981 agricultural census, it is generally estimated that about 700 holdings of 5,000 hectares or more account for two thirds of the farmlands and rangelands. Another fifth of the land is accounted for by some 6,000 rural properties in the 200-5,000 hectare range. Farms in the 50-200 hectare size account for almost five percent of the holdings and number about 14,000. The balance of the farm holdings, less than ten percent of the total area, is occupied by over 250,000 farm families working units of less than 50 hectares, of which 150,000 have less than 10 hectares. 5/

Before the 1960's, livestock was Paraguay's principal activity and source of foreign exchange. Small producers farmed principally for

self consumption. Tobacco in limited amounts was the principal cash crop. The production of crops for export began in the 1960's and, with favorable world price incentives, experienced tremendous gains in the 1970's. Between 1972 and 1982 the value of agricultural crop production in real terms grew by an average of seven percent annually and was accompanied by growth in livestock and forestry of five and six percent respectively.

The increases in crop production were led by cotton and soybeans principally for markets in Brazil, Germany, Switzerland, Japan and the Netherlands. Cotton is grown extensively by Paraguay's small farmers; it is estimated that some two thirds of the farms under 50 hectares produce cotton. Because all cotton in Paraguay is still handpicked, this crop absorbs substantial labor. The growth in export crops did not come at the expense of production for domestic consumption. The staple crops of corn and yuca also grew at five and six percent annually during this period. Domestic wheat production expanded reflecting political priorities and pressures from the highest level, but also thanks to its compatibility as a rotation crop with soybeans. Other important crops for Paraguay are tobacco, sugarcane, rice, casava, peanuts, coconuts, bananas, oranges, and castor bean.

With the help of foreign assistance, the GOP has provided growing direct support to agriculture in the form of research, extension, training, and credit services. During the last 20-25 years numerous sector organizations came into being as needs were perceived. Thus, for example, in addition to the Agricultural and Livestock Extension Service (SEAG), there also exist a cotton investigation and extension program (IPIEA), a national tobacco program (PRONATA), a national livestock investigation and extension program (PRONIEGA), and a national forest service (SFN). Agricultural investigation is carried out by several entities, but with little coordination either with SEAG or the national seed company (SENASE). Three public entities direct credit to the sector: the National Development Bank (BNF), Agricultural Rehabilitation Credit (CAH), and the Livestock Fund (FG). A separate organization, the Institute for Rural Welfare (IBR), was formed to promote and direct rural colonization programs.

Despite the plethora of public sector support institutions for the sector, according to the annual surveys of the Ministry of Agriculture, yields of most of the principal crops have not increased since the beginning of the 1970's. Soybean and tobacco yields have not increased since the beginning of the 1960's. By 1974 cotton yields had increased up to 40 percent over 10-12 years reflecting a substantial bilateral French effort to improve seed, but begun to diminish by the end of the 1970's. Corn, casava, and sugarcane have registered small but variable changes; onions and beans showed significant increases during the 1970's. (Due to an extraordinarily good weather for the 1980/81 crop year, yields of some crops such as cotton and soybeans were much higher than normal).6/

Very few small and medium size farmers use good land clearing methods, plant at the correct time and spacing, or apply adequate weed and pest controls. With the exception of cotton and tobacco, very few small and medium size farmers use improved seed. Even the larger, commercial scale farms need to improve practices regarding weed and pest control, as well as fertilizer use. Poor sustainable land management and soil conservation practice is the norm for all size farmers. Donor efforts are directed at improving the effectiveness of the weak public sector service organizations. An A.I.D. project with SEAG, to be completed by mid FY 1985, is helping SEAG adopt a farming system methodology to its extension work. IDB, IBRD, and the Federal Republic of Germany are also strengthening the extension and credit mechanisms in an effort to raise productivity and expand coverage.

The lack of a more positive and consistent trend in crop production yields is indicative of the persistent weaknesses of the public sector agricultural institutions and their limited coverage. In part, their weakness must be traced to inadequate technical preparation of human resources for the institutions. Additional fault lies in the inherent weakness within the Ministry of Agriculture with respect to formulating and putting into practice sector policies and in coordinating the various decentralized agencies. In any event, it is clear that the increases in production experienced by Paraguay in recent years are attributable principally to rapid expansion of area under cultivation largely through the opening of virgin lands. This situation signals a fundamental shift in the location of economic activity in the rural sector that is still evolving.

Almost all of Paraguay's population is located to the East of the North-South flowing Paraguay River, which cuts the country roughly in half. Within the Eastern portion, more than half of Paraguay's population is concentrated in the Departments that comprise the almost 9,000 square mile central region, that includes the capital city of Asunción. Crop production in this region is usually found in the more elevated areas, rolling and at times hilly, which were originally covered by forests. The terraces and plains of this zone often have serious drainage problems; they are covered with native pasture and scattered forests and are used for livestock grazing. The central region traditionally has supplied the Asunción market with foodstuffs and unskilled labor.

With decreasing productivity and increasing degradation and erosion of the land in the central region, the GOP accelerated its colonization program in the 1970's, making possible a rural to rural migration (as well as generating large profits from land speculation). Large numbers of farmers, working small plots of largely exhausted sandy soils around Asunción and in the central region, moved to virgin lands mainly in the Departments of San Pedro and Caaguazú and in the departments along the Eastern frontiers with Argentina and Brazil where they could work larger farm holdings. A study quoted by a World Bank report estimates that 367 colonies of small farmers with a total of

69,124 individual farm plots averaging 16.6 hectares were established by the IBR in the Eastern region of the country in the period 1963-1982. 7/

Public sector efforts were joined by spontaneous private colonization stimulated by large investments in the road network, financed in part through major external loans, and by high international prices for export crops. This process has so far spared Paraguay to some extent the problems associated with massive migration of the rural poor to cities that have plagued many developing countries. (Also, it is estimated that close to 500,000 Paraguayans are now living in Argentina as a consequence of past migration in search of employment opportunities). At the same time, the colonization process has stimulated a large influx of Brazilian farmers who, on the whole, tend to be expanding and intensifying their operations much more rapidly than their Paraguayan counterparts. One study estimates that there were 320,000 Brazilian settlers in Eastern Paraguay in 1981, or some 10 percent of the country's population. 8/

The Eastern frontier region generally has higher quality clay soils and abundant but sporadic rain. There are differences in opinion over how much land suitable for cultivation remains available for settlement and how long the rapid colonization process can be expected to continue. It is clear that public lands available for colonization are becoming scarcer, so that it will be increasingly difficult to continue the colonization process at the pace of recent years. Purchasing privately owned land for colonization schemes would severely strain the GOP's present financial capabilities and would likely push land prices up, making the settlement of low-income farmers more difficult. Moreover, there is some evidence that many of the original settlers, experiencing a myriad of seemingly unolvable problems, fairly rapidly turn over their land rights to larger more capitalized holders.

At the same time there is a growing and pervasive problem of rural land titling in the new lands settlements, stemming from the basic incompatibility of record keeping procedures of the colonization institute (IBR) and the Records Property Registry Office located in Asunción. Consequently, there are overlapping cadastral records that impede the process of issuing valid titles. This situation is further complicated by subdivision or fragmentation of the original parcel as a result of inheritance and transfers and the presence of squatters or other settlers on the same lot. Moreover, the IBR does not have a firm policy with respect to issuing definitive titles (as opposed to provisional certificates) since such titles would require the settlers to pay for the land they presently occupy de facto. This reflects IBR's split self-perception as a political institution responsible for campesino welfare on one hand and an important instrument for bringing about the productive use of unoccupied lands on the other.

To the West of the Paraguay River lies the Chaco, containing some 60 percent of the country's land base but less than three percent of

its population. The Chaco is characterized by variable rainfall, extreme temperatures, relatively poor soils in the swampy South and a semi-arid North. The region is dedicated principally to large scale cattle raising. There are also a limited number of Mennonite settlers who exploit their lands intensively. For geopolitical reasons the GOP is interested in promoting migration and investment in the Chaco. However, the scarce technological possibilities and the inhospitable environment are serious economic impediments to this area's development. (Oil exploration has occurred sporadically since the 1930's and is now being intensified in the Chaco).

### Forestry

Forestry is an important activity in Paraguay's rural sector. Lumber and manufactured wood products are exported, principally to Argentina, Brazil and Uruguay. (Despite legal prohibitions, there is also ample unregistered export of unprocessed whole logs in the frontier areas of new settlement). However, Paraguay's plentiful forestland (34 percent of the land surface) masks an extremely uneven regional distribution of resources and a mounting deforestation problem. Regional imbalances are such that the main consuming centers have lost much of their local forestry resources and wood is being hauled from increasingly remote areas. Thus, for example, although 70 percent of total forests (i.e., fuelwood as well as lumber) are in the Chaco region, about 90 percent of these resources are beyond economic exploitation because they are inaccessible or located far from the main consuming centers and composed of species for which there is little or no market currently.

The Central region has already harvested most of its forest resources and depends largely on the Eastern frontier region as a supplier. Yet, it is in this Eastern colonization area where settlers are clearing land with chain saws and bulldozers that deforestation is proceeding most rapidly. (Land clearing now results in burning off every year from four to eight times more biomass than the present demand for fuelwood). Rough estimates are that between 150,000 and 200,000 hectares per year are being deforested largely as a result of commercial operations and land clearing. Against this trend, there are only 7,000 hectares of new forest plantations in the country. If the present rates of deforestation continue, by the year 2010 there will be few economically exploitable forests remaining. 9/ Moreover, much of the land clearing has been carried out on fragile soils and slopes. Soil erosion on such lands has been measured up to 790 tons per hectare per year, with an average close to 100 tons/year, compared to the U.S. norm for sustainable management of six tons/year.

Paraguay's joint venture with two Brazilian firms in a charcoal based steel plant (ACEPAR) located about 24 kilometers upstream from Asuncion on the Paraguay River will increase the demand for wood for charcoal. The plant, of questionable economic feasibility because of its high cost and reliance on imported raw materials, is well underway and

will start operating as early as 1986. Little progress has been made on establishing a fuelwood plantation for ACEPAR. Undoubtedly, the start-up of the plant will further add to Paraguay's deforestation.

### Energy

Biomass energy sources, derived largely from the Eastern forests, currently supply over 70 percent of energy demand. But the country has one of the largest, if not the largest, per capita hydropower potentials in the world. Itaipú, the binational hydroelectric project undertaken with Brazil on the Parana River, will be the world's largest hydroelectric facility with an installed capacity of 12,600 megawatts when fully completed in 1990. Two of the 18 turbines to be installed started operation in 1984. Yacyretá, a second large binational hydroproject (with Argentina) on the Paraná River is several years behind schedule, its progress apparently being slowed down by the financial problems of Argentina. When completed, the project along with its compensation dam will have an installed capacity of close to 5,000 megawatts. Yet another large, binational hydroelectric project with Argentina, called Corpus, to be built upstream from Yacyretá is being studied. Its projected electric generating capacity is the same as that of Yacyretá. The concentration of deforestation in the watershed for these projects is resulting in massive erosion that is predicted to cause serious siltation problems that can affect the useful life of these major investments.

In spite of high growth rates in the 1970's, per capita electricity consumption in Paraguay stands at only about 300 KWh/year, one of the lowest in Latin America. Electricity service coverage has increased from 10.9 percent of the country's population in 1970, to about 39 percent in 1982.9/ The electric power sector in Paraguay is administered by the National Electric Administration (ANDE), an autonomous, decentralized public utility that is fairly well managed. There remains substantial room for expanding service, particularly outside the Asunción region where electrification of some agro-industrial areas would have economic and financial justification. Given the unlikelihood of an immediate and thorough expansion of the distribution of electricity throughout rural Paraguay, the pressure on the forest resource during the medium term will not diminish, but intensify.

While Paraguay has no known hydrocarbon resources, there are favorable expectations due to a December 1983 petroleum strike nearby in Argentina. Two U.S. companies were recently awarded large petroleum exploration concessions in the Chaco. Petroleum exploration is under the responsibility of the Mineral Resource General Directorate of the Ministry of Public Works and Communications. Its staff is small and lacks training in the field of oil exploration and production. Petroleum supply arrangements are the responsibility of a mixed GOP/private sector entity (PETROPAR) which operates a refinery that uses imported crude.

Retail marketing is carried out by several private firms, including affiliates of the international oil companies.

In the past absence of exploitable petroleum reserves, Paraguay has embarked on a sugarcane-base ethanol program to produce vehicle fuel. For this purpose, a National Commission in Fuel Alcohols (CONAC) has been organized. While this effort is an important step towards increased reliance in domestic resources and capabilities, its practicality will depend on a more comprehensive rational program, increased sugarcane productivity, better management of waste pollution, and improved efficiency of distillery operations.

#### Industry and Finance

Paraguay's industrial opportunities are limited by the country's geographical location, the small domestic market and narrow resource base, and the more developed capacity of its neighbors. Even energy-intensive industries, which might utilize electric power from Itaipú and Yacyretá, are constrained by the lack of minerals, long distances to world markets, large minimum capacities, high technology requirements and large investment needs. Moreover, until after the medium term debts are repaid, electricity from these sources will not be sufficiently cheap to foster such industries. Thus, manufacturing is not likely to play a leading role in economic growth during the foreseeable future, and its medium-term development will continue to be based on a few selected lines.

The greatest possibilities appear to be the processing for export of the country's ample supply of raw materials originating from the agricultural, livestock and forestry sectors. The food and beverage industry already accounts for the largest segment of Paraguay's manufacturing sector and includes: sugar refining, edible vegetable oils extraction; dairy; meat processing; and grain milling. The textile industry is another important agro-industry and is principally oriented to the processing of local cotton production. The national production serves a local clothing industry which is estimated to employ over 5,000 people in Asunción. The leather tanning industry has large, medium and small scale operations and provides leather for local shoe industries and artisan handicraft. The wood industry includes the production of plywood, furniture; and parquet for flooring, as well as sawnwood. Although this existing base of agro-industries is indicative that further expansion of agro-industrial activity in Paraguay is quite possible, serious constraints in productivity, quality control, and marketing know-how must be addressed. Since much of Paraguay's agro-industrial potential lies in outside markets, the punitive export rate of the current foreign exchange system represents another serious constraint.

The outlook for consumer goods industries is less clear, given the continued competition from Argentina and Brazil, while the construction materials industry will depend on Yacyretá construction getting underway. Although the share in industrial output of the metal and

engineering industries is extremely small, a few firms have emerged which have been providing some general equipment for Itaipú, as well as for agro-industries, apparently at internationally competitive price and quality levels. With the growth in technical skills which have characterized the last few years, these enterprises are now attempting to widen their final product capability. 11/

Private sector service organizations generally are limited to the traditional lobbyist type groups that seek government protection or incentives, or to the semi-social organizations that promote information exchange of general interest to the business community. UIP, the Paraguayan Industrial Union, is among the oldest of such groups, having been founded in 1936. Its membership includes some 450 individual industries and 43 associations (gremios) that group small, medium and large businesses of similar product lines or activities. UIP is first and foremost a private sector lobby group that defines the perceived interests of local industry. It also organizes expositions and conferences and promotes the acquisition of technical information through its library as well as through hosting trade and technical assistance programs offered by bilateral donors. FEPRINCO, the Federation of Production, Industry and Commerce, is also an important private sector organization that groups various associations in agriculture, industry, and commerce. Its view of the role of the private sector in the development process tends to be broader in scope than UIP's and it undertakes studies and maintains statistical information to use in elaborating and presenting its proposals to the GOP.

Within the public sector, CEPEX and INTN provide important services to private enterprise. CEPEX is the Center for Export Promotion that is part of the Ministry of Industry and Commerce. It attempts to coordinate official GOP trade efforts with the needs and requests of Paraguayan enterprises. It helps to identify markets for Paraguayan export and generally promotes the role of export-oriented industries in the development process. INTN is the autonomous National Institute of Technology and Norms. It promotes the development of industrial standards. It offers a quality control service to national industry. Also, as the local counterpart entity for the A.I.D.-financed National Technical Information Service of the U.S. Department of Commerce, INTN maintains and disseminates technical literature to local private enterprise.

Credit needs of the industrial sector are supplied by the National Development Bank (BNF) and the private banking system, comprised of some 20 foreign and locally owned commercial banks. The Central Bank of Paraguay, through its special development fund (FED), rediscounts eligible loans extended by BNF and the private banks, using external donor loans as well as domestic resources. BNF also has access directly to multilateral and bilateral external loans for relending to industry. In Paraguay there is no developed capital financial market outside the banking system which, itself, is only a tiny factor in overall economic activity. Credit extended by the financial/monetary system amounts to



roughly only 15 percent of GDP, and an increasing share of credit, now 30 percent is Central Bank support for the public sector.

Interest rates and credit in the banking system are distorted by sectoral lending requirements, interest rate ceilings and high deposit reserve requirements. Maximum interest rates payable on bank deposits range from 11 to 15 percent and have not been changed in the face of inflation which is now running well above that range. Discouraged by negative real interest rates, savings through deposits in the financial system have been contracting in real terms. Because of high reserve requirements ranging from 30 percent on time deposits with maturities in excess of 60 days to 42 percent on demand and savings deposits, the costs of funds to banks average about 20 percent. Anti-usuary regulations, however, limit interest banks can charge loans irrespective of funding costs. Moreover, banks must devote 50 percent of their loan portfolios to so called "productive" credits for agriculture, manufacturing and exports at interest rates not to exceed 14.5 percent. The Central Bank helps subsidize these loans by rediscounting up to 40 percent of the credits at eight percent. The balance of a bank's loan portfolio is restricted to an interest rate maximum of 24 percent. As a practical matter, banks require compensations such as outstanding balances from their credit customers so that effective loan rates on the half of portfolios not restricted to "productive" credits may average 30 percent. This still affords little gain for the risks entailed during difficult economic periods. As a result commercial banks have displayed reluctance to expand lending to the private sector.

#### C. Social Services

##### Health and Population

General consideration of birth rates, mortality rates, and infant mortality does not clearly reflect health conditions because of the under-registration of vital statistics. Nevertheless, available information places Paraguay among the countries in Latin America with the worst health problems. High among the causes of death are diarrhea diseases, acute respiratory disease, and transmissible diseases, among which tuberculosis constitutes the primary cause of death. Due to control programs, malaria incidence is minimal. The yellow fever vector has been detected again after having been eradicated in 1981, but no human cases have yet been detected. Chagas disease is endemic to Paraguay and there are about 5,000 known cases of leprosy. The mortality rate for 1979 was 7.8 per thousand inhabitants; infant mortality, 72.9 per thousand live births; mortality of children from 1 to 4 years old 5.4 per thousand annually; and maternal mortality, 4.4 per thousand live births 12/. These rates are high, especially the mother and infant mortality rates, which are very sensitive parameters for indicating overall health status of the population. (1984 infant mortality, according to official sources, was 51 per thousand, but the real rate is much greater due to under-reporting of births and deaths coupled with an

internal Ministry bias for exaggerating sector gains. A UNFPA study on maternal/infant morbidity and mortality expected to be completed in early 1985 will likely confirm the continuation of high levels). Paraguay's intermediate level of population fertility is deceptive. It reflects a combination of near maximum fertility in new colonization areas where health, education, and housing conditions are primitive, averaged with cosmopolitan low birth rates of the capital and its environs.

According to the National Nutrition Survey conducted in 1976 by the Ministry of Health (the sample of which was not sufficiently large to ensure a reasonable degree of reliability), the principal deficiencies diseases in the country are: a) iron deficiency anemia affects six percent of the population; b) vitamin A deficiency, which affects 46 percent; c) endemic goiter, 15.8 percent of children between age of 5 and 14 years; and d) protein-calory malnutrition. On the basis of weight-age ratio, 27 percent of the children surveyed had grade I malnutrition, and four percent had grade II malnutrition.<sup>13/</sup> Another study made in 1982 of children of less than five years of age indicated that 18 percent suffered from some degree of malnutrition.<sup>14/</sup>

The health sector comprises three subsectors in accordance with their dependency and mode of financing: the public subsector, formed by the Ministry of Public Health and Social Welfare, the Military Health Unit, the Police Health Unit, the University, the Municipal Health Unit, and the Corporation of Sanitary Works (CORPOSANA), with financing from the national government; the semi-official subsector consisting of the Social Security Institute (IPS), with its own financing; and the private subsector, formed by a number of private health clinics, many of which offer private health insurance programs and/or are affiliated with one of the private health insurance companies that operate in Paraguay. These private entities, however, are directed at the middle and upper income segments of the population. There is no coordination between these groups, and much of the infrastructure is located in Asunción. Thus, for example, whereas the country as a whole has an estimated 1.4 hospitals beds per 1,000 inhabitants in Asunción the ratio rises to 5 per 1,000. Moreover, the GOP continues to build more hospital facilities in Asuncion.

Consequently, it is estimated that not more than 60 percent of the population is at a reasonable distance from some medical treatment establishment and that the quality of the coverage is in many cases unsatisfactory because of the lack of facilities and essential minimum equipment. Public water supply coverage in Paraguay is among the lowest in Latin America. Coverage in 1980 was estimated at only 22 percent of total dwellings. Rural population generally relies on private wells or water vendors, with consequent high health risks. Only Asunción has sewerage services (a coverage of about 50 percent). The rest of the urban areas have either septic tanks or latrines. In rural areas, the use of latrines is widespread, but most of these homemade latrines do not comply with minimum standards of safety and constitute a considerable

health hazard not only for the users, but also for the population of the area.15/

The population structure of Paraguay, where over 50 percent of the population is under 20 years of age, underscores the risk exposure of its inhabitants to health problems since the young population is more susceptible to the agents of communicable disease. The coverage and effectiveness of the maternal-child health program is limited despite efforts of the other donors such as PAHO, UNICEF, and UNFP. Moreover, the GOP has not had an active family planning program since the mid-1970's. However, in 1985 the Maternal-Child-Health (MCH) Division of the Ministry of Health, together with assistance from PAHO, will begin providing education on natural family planning techniques (i.e., Billings method) through its facilities. There is also an active private sector service delivery program. Induced abortion, illegal in Paraguay, is estimated to terminate some 15 percent of pregnancies. Clearly, despite the GOP and Church positions, there is a large unfilled demand for family planning services.

#### Education

Primary education in Paraguay is compulsory for all children between the ages of 7 and 14. The system comprises about 550,000 students, taught by 14,000 teachers and housed in more than 3,690 primary schools. Sixty percent of the student population is rural and half is female. The system has three overriding problems: (1) only about a third of the eligible rural children complete six grades of primary school; (2) learning achievement of the students is comparatively low when students leave school; and (3) the system has basic administrative and managerial weaknesses that impede coordination, the flow of information, and the supervision of teachers.

Despite a relatively high gross enrollment ratio, there are important regional disparities in enrollment coverage and, with a concentration of students in early grades, a low throughput (or efficiency) of the system. Rural schools tend to be concentrated in the Central region of the country. The new settlement areas of the Eastern frontier region, in particular, lack primary education infrastructure. Enrollment is skewed in the early grades due to the high rates of repetition and dropout. Only about one-third of the relevant age group in rural areas finishes primary school compared with 80 percent in urban areas. Consequently, it has been estimated that the average level of schooling for the adult rural population is 2.7 years of primary schools.16/

As in other LDC's, the high drop out rate is in part due to difficult access, dissatisfaction with the irrelevance of the traditional curriculum, and lack of instructional materials. In Paraguay, however, language also is a very important factor. The native language of Guarani is used almost exclusively by campesinos. Yet the official language used

in the schools is Spanish. The first year rural students who enter with no Spanish language capability at all, quickly fall behind. Those not able to master Spanish end up repeating grades or eventually dropping out upon deciding they would never be able to catch up. An A.I.D. financed pilot effort in bilingual rural education carried out in 1981-83 demonstrated significant reduction in drop out rates when instruction was in Guaraní on a declining share over the first three years. The Ministry of Education is now attempting to expand this pilot program nationwide.

Quality of rural primary education, i.e., cognitive achievement among graduates, remains unsatisfactory. Lack of training in teaching methods, particularly multigrade teaching which predominates in rural areas, and lack of incentives to work in the difficult conditions limit the quality of the teachers found in the rural areas. The primary education curriculum developed with A.I.D. assistance in the early 1970's and the corresponding instructional materials still have not been widely adopted by the system due to the lack of adequately trained teachers. Under the educational reforms instituted with A.I.D. assistance, two years of post-secondary education in one of 14 teacher training institutes is now required of all new primary school teachers. Through World Bank financing, the Ministry of Education is expanding the in-service training of teachers, publishing instructional materials, and addressing its administrative weaknesses. World Bank and IDB are also financing the construction of new primary schools, with emphasis on the areas of new settlement. Still, many teachers in rural areas have little more than a basic education themselves.

Secondary, or middle, education in Paraguay has two well-defined stages: basic and diversified. Basic education lasts the three years comprising grades 7 through 9 and has a common program of studies at all schools (i.e., private or public). The diversified secondary education program comprises grades 10 through 12 and offers certificates (Bachilleratos) in humanities (selected by those who intend to teach or go on to the university level) or in industry, commerce or agriculture. This division and introduction of technical activities was carried out as part of a sector reform program initiated in the early 1970's to promote the training of middle level technicians. As part of these reforms, the Superior Institute of Education was established with A.I.D. assistance to provide a three year teacher training curriculum that now is required of all middle level teachers. There are over 700 middle level schools in the country, about a third of which only offer the basic cycle. Only about 25 of these schools offer the commercial or technical curriculum given the relative newness of the diversified program. In 1983 the system had some 143,000 registered students, 75 percent of which were in the official schools and the balance in private schools.

The Ministry of Agriculture operates six public sector agricultural training schools, and has one under construction in the Chaco. Four of these schools offer a full secondary level education (bachillerato agrícola) compatible with the regular academic program of

the Ministry of Education. All of these schools also have an option for a práctico rural certificate at the end of a two-year program. In addition, there are two public agro-mechanical schools, one started with Swiss assistance and one with Japanese assistance. They offer a program consisting of two years of formal training post-basic cycle plus a six month in-service training. Two forestry schools (also one assisted by the Swiss and the other by the Japanese) are operated by the National Forestry Service under the Ministry and offer a one or two year curricula for práctico or técnico forestal, also post basic cycle. The Ministry supervises the four private sector agricultural secondary schools that operate in the country. Of these four, only the Salesian Agricultural Institute in Coronel Oviedo offers a complete secondary school curriculum while the other three private schools offer only a program for práctico rural consisting of three years of training. Many of these schools have benefitted from IDB financing for physical facilities and equipment as well as IDB-financed technical assistance from the Inter-American Institute for Agricultural Cooperation (IICA). A follow-on IDB loan, directed for the improvement of the public agricultural schools, is under consideration. While physical facilities are relatively good, a number of deficiencies in the operation of the schools and their curricula remain to be addressed.

Adult literacy in Paraguay is estimated at about 80 percent. The dearth of appropriate reading materials, particularly in the rural sector, tends to reduce functional literacy below this level. The Ministry of Education's Adult Education Department provides remedial primary education for adults and adolescents over 15. The first six months of a three year evening curriculum is used for developing literacy skills. The estimated current level of attendance is about 10,000. A Ministry sponsored radio program also attempts to promote reading and writing abilities among the rural population, but to date has been limited in scope with a registered audience of only about 1,000.

Paraguay provides short term skills training through its National Service for Promotions of Professions (SNPP), established in 1971 and attached to the Ministry of Labor. It has the legal mandate to provide professional and specialized technical training for all sectors, at all levels: basic skills, semi-skilled training, and specialized technical training.. Funding comes from a one percent payroll tax levied in the modern, manufacturing and services sectors. SNPP's initial aim of training activities was to meet vocational and technical skills requirements in the modern sector, mostly manufacturing. However, in 1976, with USAID funding, SNPP started a modest rural basic skills training program. SNPP's rural program is being expanded with a World Bank loan, the second of two loans to this organization. SNPP has also modified its charter to include managerial training and assistance to business enterprises in managerial and related training matters in view of high demand.

The In-Service Training Center (CAES), a unit of the School of Economic, Administrative, and Accounting Sciences of the National Univer-

sity of Asunción (UNA), offers training courses for upper-level and middle management public officials and for operational or general staff (e.g., secretarial and clerical). It also offers courses in organizational development and other modern administrative techniques oriented towards private sector needs. CAES has received past A.I.D. funding as well as more recent assistance from a German foundation. IDB has recently approved a grant to help CAES carry out in-service training programs for the public sector.

University education consists of 60 career program offerings at the publically financed National University of Asuncion (UNA), and 16 career program offerings at the private Catholic University. The various career programs of study last from three to six years. In 1984 there were over 28,000 students registered at the universities, of whom about 20,000 were studying at UNA and 8,000 at the Catholic University. Many of the career offerings are at night in order to permit attendance by part-time students who frequently must earn income during the day.. In addition to UNA and Catholic University, a private foundation established in 1979, offers post secondary education in business (ESAE - The Superior School of Business Administration). Responding to a growing demand, some 1500 of ESAE students are enrolled in a two or four year computer program or in a four year business program. Recently, ESAE initiated an optional fifth year for additional degree in auditing and finance. As with the universities, ESAE's programs are also given at night to facilitate attendance of students who work fulltime.

The growth in enrollments in the primary and especially the middle level, together with the growth of population and per capita income, have generated rather strong pressure in university enrollments. Projections through 1991 indicate shortages of professionals in nursing, accounting and business administration, engineering, and library sciences. Other areas of important national needs include the basic and polytechnical sciences, architecture, veterinary sciences, odontology, medicine, chemistry, and pharmacy.

There are numerous deficiencies that create low internal efficiencies in the University education system and contribute to poor overall quality. The system is designed to award the perseverance of part-time students rather than promote a capacity to reason and analyze. In the case of UNA 90 percent of the teachers work on a class hour basis and only 10 percent are full-time or half-time. Classroom time is curtailed excessively by university sport activities and in preparation for exams. Neither UNA nor Catholic University offer post-graduate programs; few faculties conduct research, an essential activity for improving the quality of teaching and creating an academic spirit among the teachers. Resources for purchase of scientific research and library materials are extremely limited. Studies indicate that the current costs of a university student in Paraguay is about one-third of the average for Latin American universities. This general scarcity of financial resources at the university level is also reflected by the fact that a

large IDB loan to UNA approved in 1982 has not yet been activated due to the lack of GOP counterpart funds.

### Housing

The shelter sector is perhaps Paraguay's weakest social service delivery activity. Whereas large amounts of external donor assistance have been devoted to health and education, no outside resources have gone into housing in recent years. The GOP has declined to absorb the maintenance of value risk of foreign currency loans to the shelter sector. At the same time, the negative interest rate structure of Paraguay's financial system compared to inflation limits the ability to attract domestic resources.

The Paraguayan Institute of Housing and Urban Development (IPVU) is a public sector housing development and financing authority started with an IDB seed capital loan in the 1960's, and received an A.I.D. Loan in 1971. It has essentially run out of lendable funds and is concentrating on managing its existing portfolio. It has made a total of 7,874 loans since its inception. In addition, a Public National Savings and Loan Bank (BNAP), which benefitted from an A.I.D. Housing Guaranty in the late 1970's, serves six private sector Savings and Loan Associations. The deposits mobilized by the S&L's are declining in real terms (although 1984 saw an increase of 4.7 percent in nominal terms) given the prevailing negative interest rate structure. Moreover, the S&L's are now lending to the middle and upper middle class segment of the population. The total loans made by the system are about 17,500 since operations begun.

Accordingly, the shelter needs of the urban and the rural poor are essentially being ignored. There is some limited work of a prototype nature being done by local universities and PVO's, partly stimulated by the 1983 floods. Yet, one estimate indicates that Paraguay's shelter deficit is 115,000 units, including replacement needs for overcrowded dwellings. <sup>17/</sup> Other estimates place the deficit at more than double that amount when replacement of substandard units is also considered. The draft indicative plan for 1985-89 establishes tentative targets of furnishing some 44,500 solutions through upgrading (25,000 of which would be rural) 30,000 new rural solutions (principally in connection with the colonization programs), and 11,000 new urban solutions, of which 3,000 would be sites and services.

While the large rural to rural migration that has taken place has spared Asunción the urbanization crisis that affects its counterparts throughout the region, rapid growth with its corresponding squallor has taken place along the urban-rural edge of Asunción. As lands available for colonization become occupied or priced out of the reach of the poor, Asunción's problem will intensify. Similarly, secondary cities such as Encarnación, Ciudad Stroessner, Pedro Juan Caballero, and Cnel. Oviedo are attracting the poor who are leaving smaller towns or the less pro-

ductive agricultural regions. Urban land planning regulation has been virtually absent or unenforced. The accelerated pace of urban growth combined with speculative land development practices has resulted in widespread urban sprawl even in smaller towns and a lack of coordination among municipalities, urban infrastructure agencies, and housing producers, both public and private. Progress in meeting the growing shelter needs will depend on (a) improved coordination of shelter sector policies /programs that promote private sector participation; (b) an increased flow of resources to the sector coupled with better management of those resources in terms of savings mobilization needs, and (c) the adoption of appropriate technologies that permit economic solutions for the most needy.

### III. Program Rationale

#### A. Priority Development Issues

Important macro-economic policy concerns are: (a) an overvalued official exchange rate that causes serious distortions in decision making; (b) a tax structure that is inadequate for generating the revenues needed to finance the infrastructure and social services necessary for Paraguay future development; (c) a controlled financial market that results in negative or near negative rates of interest for credit transactions and savings mobilization; and (d) the undertaking of large public investment projects which do not pass the test of economic or financial viability, and/or involve productive ventures (e.g., steel, cement, fuel alcohol, petroleum supply and refining) previously left to private endeavor. Related to the ability of the public sector to design and implement sound policies, is the absence of a dedicated and professional civil service. These concerns are shared in varying degrees by the major donors, especially IBRD and IDB, who have discussed their points of view with GOP officials. However, in the absence of a multi-lateral donor consultative group that can forge strong donor positions on these issues, it is unlikely that additional, more effective pressure can be applied to obtain favorable GOP action. In fact, financing from foreign official sources sometimes perpetuates some of these problems.

Nevertheless, indications are that some progress will be made even without a more drastic action by the donors. Pressed by the export sector, further exchange rate adjustments are expected during the first half of 1985 (but like the devaluation in 1984, may not be sufficient to bring about equilibrium). With respect to fiscal reform, the GOP has increased certain tax rates and improved tax administration in 1984 with resulting revenue increases. New trade legislation is intended to reduce contraband. Moreover, IDB has recently approved a technical assistance program to help the Ministry of Finance modernize its tax structure. The same IDB program will also assist the Ministry to participate more actively in the formulation of a national public sector investment pro-



gram. At the local level, A.I.D. has met with IDB to coordinate its participant training program with training possibilities for complementing the IDB effort. Some of the specific investments considered questionable by the World Bank are: (i) the overscale upgrading of the airports planned at Ciudad Presidente Stroessner and Pedro Juan Caballero to duplicate facilities available just across the border in Brazil; (ii) road and bridge investments to further integrate the sparsely settled Chaco; (iii) an oversized expansion of the Asunción port; and (iv) large hospitals for Asunción. However, as long as Paraguay can obtain credits from other bilateral governments to help finance uneconomic activities, there will be a strong temptation to go ahead with them.

In the agriculture sector key concerns are: (a) the need to improve productivity in order to facilitate continued growth of the sector over the medium term; (b) the need to improve the agricultural marketing process and to promote expanded markets, particularly in the neighboring countries, for agricultural commodities, including elaborated products; (c) the need to improve the agriculture colonization process including issuance of land titles and better utilization of remaining lands; (d) the need to increase and improve the flow of credit to the sector; and (e) the need to adopt improved soils conservation practices and address environmental concerns. All these concerns can be readily addressed through coordinated donor efforts and improved public and private sector organization. The basic institutional structures have been established. It is now a matter of increased and more effective coverage. Technology packages exist that can be adapted and applied to increase Paraguay's agricultural productivity. Investments for reducing marketing costs (e.g., feeder road improvement, storage facilities, etc.) have been identified. An export promotion agency (CEPEX) has been established that can negotiate improved market access. External donor financing for improving colonization activities addressing environmental concerns, and providing sector credit is readily available. The chief limiting factor will be the GOP's ability to manage and coordinate sector programs and to maintain the incentives for continued strong private sector performance. At the same time, it will be crucial for the private agricultural sector to become more collaborative and active in developing its own mechanisms for accessing needed technology and in dialoguing with the GOP on sector policies.

In the energy sector, the issues confronting Paraguay are: (a) the need to formulate a long-term electricity expansion strategy consistent with comparative advantages in order to make best use of the huge amounts of hydroelectricity the country will have from the bi-national projects; (b) a growing demand-supply imbalance and waste in the fuelwood sector; (c) the need to improve efficiencies in petroleum supply and to attract private investment in petroleum exploration drilling; and (d) the need to develop and adopt a comprehensive and coherent national program for the production of sugarcane-based ethanol. Resolution of these issues cannot be achieved quickly. With growing GOP awareness, supplemented by appropriate technical assistance and training, a number of actions can be started to address these concerns.

The important issues faced by the industrial sector are: (a) the need to become outward oriented (i.e., have an export mentality) with respect to seeking new market opportunities given Paraguay's limited internal market; (b) the need to generate new employment opportunities at reasonable costs, thereby expanding the internal market; and (c) the need for improved managerial capacity for bringing about greater productivity, efficiency, and responsiveness to opportunities. Fundamental changes will be required in the attitude of the local entrepreneur in order to respond to these issues. At the same time, the GOP must resolve macro-economic issues, such as the exchange rate, that tend to distort decision-making. A positive and progressive private sector leadership must evolve. Dialogue with official authorities must become more productive if the mutual suspicion is to lessen. Such changes will not be immediate, but there is some evidence (e.g., CEPEX and the new trade legislation) that the process can be promoted and facilitated.

The key issues in the social services sector involve the: (a) expansion of coverage, particularly in the areas of new settlement, with corresponding concerns of financing investment and increasing recurring costs; (b) increased efficiency of services through better coordination and planning; (c) improvement in the quality of services provided through human resources development; and (d) improvement in administration and supervision including better financial management and audit at all levels. Some elements of these concerns can be readily managed within the particular sector. For example, quality of primary education can be improved through expediting in-service teacher training programs necessary for adoption of the new curriculum already developed. Better coordination between the Ministry of Health and the Social Security Institute (IPS) would improve coverage and the overall efficiency of primary health care. Other elements depend on higher level policy decisions including those regarding internal and external resource mobilization and allocation. Examples here include the need for a more progressive family planning policy, a favorable decision on allocating counterpart for the IDB loan for university strengthening, a reversal of the decision to invest heavily in sophisticated hospitals in Asunción, etc. GOP movement in the correct direction on the individual sectoral concerns can be prompted by the external donors given Paraguay's high dependence on outside financing for its development activities.

#### B. Other Donors

IDB and IBRD are by far the largest donors to Paraguay's development process. Infrastructure investments in power transmission and road construction and rehabilitation account for a large portion (\$242 million) of IDB loans that are active, i.e., having undisbursed balances. The largest number of active IDB loans (\$103 million) is dedicated to rural development, including activities in colonization, marketing, and credit. These efforts are complemented by loans in the health and education sectors which are predominantly addressing rural problems (\$108.8 million). The remainder of active IDB loans are in

industrial credit, urban development, and miscellaneous purposes, such as pre-investment and tourism (\$51.5 million). IBRD active loans emphasize rural development, agriculture, and livestock (\$149.6 million). Road construction is the next largest category (\$85 million), followed by health and education (\$58.8 million). The balance of IBRD loans is in industrial credit and pre-investment studies (\$46 million).

In addition to the almost \$800 million in active IDB and IBRD loans, both organizations have a number of new loans in process. IDB is planning a continuation of its credit activities with the BNF through approved global loans in agriculture (\$37.5 million including IFAD resources) and industry (\$25 million). The Asunción water supply will be expanded through a major loan to CORPOSANA (\$67.8 million). Additional IDB financing for consolidating its rural development efforts in the new settlement areas and in technical agricultural education is also being programmed. The IBRD plans to continue its support for the new settlement areas with new loans for rural development (\$40 million) and feeder road construction (\$20 million). A fifth tranche for its primary education program will promote overall improvements in basic education and help finance construction of schools in the new settlement areas (\$14 million). Assistance to the municipality of Asunción for a variety of urban development activities, including city planning, transportation, waste management, and food marketing, is planned (\$15 million). The IBRD also has indicated its interest in: (a) supporting the institutional strengthening of the Ministry of Agriculture; (b) additional rural development efforts in coordination with IDB in the colonization areas including accelerated property titling; (c) follow on agricultural credit to be channelled through the Central Bank to the private banks as well as the BNF; and (d) a joint technical assistance activity with UNDP for an Energy Sector Management Assistance Program to address a variety of conventional and non-conventional energy concerns.

The UNDP together with other organizations in the U.N. system have an active technical assistance program of over \$4.0 million dollars. The UNDP is assisting the GOP develop a new indicative plan for the 1985-89 period. Another of the major activities under this category is the technical support being provided by the local office of PAHO in maternal-child health care, environmental sanitation, and disease control. In 1985 PAHO will add a fulltime family planning advisor to its in-country consultant staff to work with the maternal-child health care program. PAHO's health efforts are supplemented by World Food Program (WFP), UNICEF and UNFPA. Current WFP fund for work activities total over \$12 million in food imports and promote environmental sanitation and maternal-child health care in poor rural areas. WFP also supports colonization programs in new settlement areas by helping provide food needs before initial harvests. The UNICEF program promotes breast feeding, Oral Rehydration Therapy (ORT) for control of diarrhea in infants, and immunizations as part of its support to the maternal-child health program. The UNFPA program runs about \$350,000 annually and provides equipment, training, and other support for maternal-child care.

Other UNDP activities address project development and technical assistance needs in a variety of sectors including agriculture, transport, and exports.

While FAO does not currently have a large program in Paraguay, it has provided some important technical assistance particularly in forestry and integrated pest management, the latter regarding the increasing concern about boll weevil infestation of Paraguay cotton production. Over the next several years, FAO is planning an increased level of activity with important projects in: soils conservation, appropriate post harvest technology; agricultural investigation and university education; forestry; and sugarcane based fuel alcohol.

IICA has an active representation through a broad based agricultural program having an annual level of over \$1.2 million and a fulltime technical staff of 10, supplemented by short term specialists. Among other things, IICA is providing technical assistance training in the development of the technical agricultural schools and for improvement of agricultural research. These activities are financed by IDB and include long-term participant training as well as in-country courses. Other IICA programs are directed at the role of rural women, small farmer group lending, plant sanitation, agricultural marketing, land titling, and animal husbandry.

The OAS assists mainly with project planning and development activities with emphasis on rural area development, including development of the Chaco. It has provided training in international trade and tax and budget administration. On-going technical assistance programs include: tourism, pollution control, non-conventional energy (bio-gas); skills training; and micro-enterprise development.

The Government of Japan through the Japanese International Cooperation Agency (JICA) and its overseas Economic Cooperative Fund (OECF) furnishes substantial technical and financial assistance, including a peace corps-type volunteer program with over 40 specialists in-country and an important participant training program. Rural and agricultural development has been an important emphasis of the Japanese effort. A major study is being carried out on the agricultural development (rice production) of the area to be irrigated as a result of the Yacyretá hydro-electric project. A large agricultural loan over \$40 million to provide small farmer technical assistance and credit, and to strengthen research and extension is under consideration. The Japanese financing is to cover the estimated foreign exchange costs of the project. Assistance has also been provided for the start up and operation of an agricultural mechanical school and a forestry school. (It should be noted that there is a large rural colony of Japanese settlers about 75 miles outside of Asunción). Japanese assistance has also been directed at the telecommunication sector, hospital construction and the establishing of an institute of tropical medicine. Japanese

financing has also been provided for airport construction (Ciudad Presidente Stroessner) and acquisition of ships.

The Federal Republic of Germany provides substantial short and long term participant training, visiting professors, and a variety of short term experts. One of its areas of concentration is forestry sector development and includes support to the school of forestry at UNA. A study of Paraguay's industrial sector was carried out by Germany. German assistance is also provided for the leprosy treatment program. The German development financing authority, Kresitanstalt FW, has some \$15 million in active loans to Paraguay for such activities as rural development, artesan and small industry, construction of markets, and rural health services and water supply.

France concentrates its participant training and technical assistance program on the agriculture and curative health sectors. Its assistance with the development of cotton seed appropriate for Paraguay has contributed greatly to the expansion of this export crop. Veterinary science has been another priority under the French program in Paraguay. Financial assistance, estimated at \$65 million is being provided for construction of a new national hospital near Asunción. Financial assistance is also made available for public industrial (cement plant) and infrastructure (water supply) projects to promote French commercial ties to Paraguay.

The Swiss Government and Swiss supported organizations carry out an active technical assistance program in Paraguay. Completed programs include a small ruminants activity with the UNA's veterinary faculty and a dairy improvement effort with an agricultural cooperative in Ciudad Presidente Stroessner. The principal on-going effort is technical assistance to the National Forest Service for reforestation in watersheds and the operation of a forestry school. Limited short term scholarships for technical training are also provided. The Swiss financed Helvetas foundation provides technical assistance for an agro-mechanical school in rural Paraguay, which has assisted with implementing an A.I.D. appropriate technology prototype program. The Swiss Red Cross has also provided disaster relief assistance to Paraguay.

In addition to their major hydroelectric investments described previously, the neighboring governments of Argentina and Brazil also maintain a variety of technical assistance and training activities. Brasil has provided credit for the construction of a cancer and burns hospital in Asunción. Other bilateral governments that maintain a development presence in Paraguay include Spain and the United Kingdom, Belgium, Taiwan, and South Africa.

As evidenced by past cases of overlap and duplication, donor coordination needs to be improved. The UNDP plays a very important and useful role in improving the coordination of technical assistance. Also, the IDB recently approved a technical cooperation activity that will help

establish a technical cooperation project inventory system within the Technical Planning Secretariat (STP) attached to the Office of the Presidency. Nevertheless, there is still need for improved coordination among IDB and IBRD, which are by far the major financial donors. The large amount of resources from both institutions going into the agriculture sector, in particular, warrants the development of joint positions vis-a-vis the GOP on credit policies, colonization priorities, and management of agricultural research, extension, and education activities. The growing demands in the GOP for recurring cost financing and on counterpart generation resulting from donor activities is another area where joint collaboration by these two organization is recommended.

### C. Role for an A.I.D. ADC Program

#### Policy Framework

An Advanced Developing Country (ADC) program in Paraguay will create a new look, private-sector oriented development presence at low cost to the U.S. Government. This presence can usefully further current U.S. foreign policy objectives, as well as long range concerns regarding the post Stroessner era. Accordingly, it is important that the ADC strategy open new channels of communication and influence to a wide spectrum of potential leaders and development organizations from which leaders may emerge. An ADC program that brings about or reinforces collaborative working relationships with development-oriented Paraguayan private sector individuals or organizations can contribute usefully to medium term U.S. foreign policy interests in Paraguay in this regard. Similarly, by being focussed on private sector initiatives, an ADC program can provide opportunities for individuals to exercise and develop their own leadership capacities; access to such opportunities is very limited or controlled under current conditions.

The ADC program in Paraguay will also reinforce the development objectives of other U.S. Government organizations and U.S. PVO's. Peace Corps maintains a sizeable program in Paraguay with some 160 volunteers that are working on: agriculture and home extension; forestry and natural resources; primary school teacher training and special education; and cooperative management. A.I.D. coordination and interaction with the Peace Corps will benefit the development impact of both programs. Also, there are shared objectives with USIA and an A.I.D. ADC program in terms of relations with future leaders as well as the transfer of information/technology process. Other U.S. organizations, such as the Department of Labor and the Fish and Wildlife Service, have interests in Paraguay which can serve as useful resources to an ADC program.

Despite the abundance of other donor activities, there are important gaps that a well-designed ADC program can help fill. These gaps are found largely in the private sector since most donors work almost exclusively with government organizations. Moreover, even a small ADC

program, if provided financial flexibility and agility, can be instrumental in helping major donors address key development issues in a more effective and timely manner than might otherwise be possible. A quick injection of short-term technical assistance, for example, or a site visit to inspect a successful development activity elsewhere can help promote the adoption of needed GOP policy/program improvements. Thus, the ADC program in Paraguay should also work closely with the major donors to enhance their institution building and policy improvement inputs.

The administrative requirements for implementing an ADC program are also an important concern. Given extremely limited staff and operational resources, the project monitoring and management burden will be an important factor in the scope and composition of the program. Wherever practical, preference will be given to those activities that internalize their own administrative support requirements. This is exemplified, for instance, in activities arranged through add-ons to S&T financed cooperative agreements and other centrally managed PVO's and grantees.

The essential guidelines for an ADC program for Paraguay, then, can be summarized as:

- promotion of U.S. foreign policy objectives by reorienting development assistance towards the non-official sector in activities that promote equitable growth;
- maximization of the development impact of a small ADC program through filling gaps left by other donors, enhancing the institutional development efforts through training, and leveraging such assistance to influence sector policies; and
- minimization of the administrative support burden by drawing on existing support mechanisms and on experienced organizations with proven abilities.

Within these general parameters, the ADC program will have two components responding to the specific needs of Paraguay's development process: Human Resource Development and Private Sector Technology Transfer. Each will group several activities. A third component will correspond to activities of Special A.I.D. Interests and Non-Concessional Assistance that are generally applicable to all developing nations.

#### Human Resources Development

It is clear that Paraguay has not yet attained the level of human and institutional development shared among the other ADC's in the region, viz: Brazil, Mexico, and Colombia. Accordingly, a principal focus of the ADC strategy for Paraguay will be the improvement and expansion of the participant training program. Skilled human resources

are urgently needed for Paraguay to carry out its development programs in the private as well as the public sector. In addition to promoting important private and public sector institution-building objectives, the program will enhance USG interchange and relations with potential future leaders.

Historically, Paraguay has maintained a good record with respect to the permanent return of long term participants. Moreover, recent experience under the LAC training initiatives project shows that there is ample demand for long-term academic training in the U.S. by well qualified Paraguayans. Under the ADC program priority areas and candidates will be identified in collaboration with the Country Team and the GOP as represented by the STP. In addition, increased efforts will be directed at coordinating human resource development needs with other donors. The activities of other donors, especially those of IDB, PAHO, and UNDP which all have local offices, offer excellent opportunities for identifying participant training possibilities having developmental and institutional strengthening priorities. Similarly, local PVO's will be canvassed periodically regarding their training needs.

Another concern to be addressed in implementing participant training under the ADC program is the high cost of Master's level long term academic training in the U.S. and resulting limitations in the number of individuals that can be assisted with a given amount of funding. While M.S. training in the U.S. will use the bulk of the training funds, the relative share of non-degree, medium term (6-12 months) training will be increased. Opportunities for technical training in Spanish in Puerto Rico will be considered in order to reduce the overall costs of language training and to open up training possibilities to more candidates. Also, financial needs criteria will be applied more rigorously, particularly in cases of long term academic training. In this regard, a policy dialog will be initiated with the GOP and private sector leaders concerning the appropriateness of promoting a private sector student loan service. Access to student loans, for example, would broaden the base of future candidate selection, since not all qualified candidates have sponsoring organizations that can afford the local contribution (e.g., air fare). Although no A.I.D. funds are being proposed to finance the fund, a small amount of financing for invitational travel and short-term technical assistance would be required to promote this concept and further the dialogue.

The financing for participant training activities under the ADC program will come from regional or central sources. An increase to an annual level of \$300,000 is proposed. For FY 1985 the participant training funds will be obligated through an amendment to the existing agreement with the GOP's STP. Alternative obligating mechanisms for future year funding will be studied as part of the process of developing the Country Training Plan (CTP) required for FY 1986. Given staffing constraints, a small amount of PD&S funding may be needed to assist with preparation of the CTP.



Under the human resources development component, it is also planned to work with two Paraguayan private sector organizations:

- Catholic University Graduate School of Management - The University currently has an undergraduate school of accounting and business administration that offers a six year curriculum to about 2,500 students currently enrolled. There is a strong demand for improved management capacity in the private sector as evidenced by recent efforts to provide in-service training programs and continuing strong attendance at schools abroad. There is no quality graduate management training facility in-country, nor is there an on-going research program that addresses the needs of the private sector. To overcome these constraints, Catholic University intends gradually to build up a small graduate program. Towards these ends, an interchange program with Kansas State University has already been started under the Partners Program. A USIA grant to KSU has been requested for FY 1985 under the USIA university-to-university linkages program. KSU's extensive involvement in agri-business and grain marketing are especially attractive in terms of Paraguay's future developmental needs. The proposed A.I.D. grant would build on the USIA initiative through technical assistance, training, library development. The project will have two phases. Stage I to be implemented in FY 1985, will consist of detailed assessment, design and initial technical assistance and training. For this purpose an initial grant will be made once the confirmation is received that the USIA linkages grant to Kansas State University/Partners is forthcoming. The grant will finance the analytical work necessary by outside consultants to recommend and prioritize the actions necessary to strengthen Catholic University's graduate program. The outside consultants will include KSU faculty as well as advisors from INCAE and other Latin America business schools. Observational travel to other Latin American graduate schools of business by University faculty and administrators will be funded. Upgrading of faculty through pilot in-country training and attendance at short term workshops and seminars will be tested.

By the end of the first phase, Catholic University will present to A.I.D. a prioritized list of activities to be carried out during the next phase. The report will include self-help actions to be taken by the University as well as those inputs that can be financed externally under the Stage II of the project. Upon satisfactory assurance that the self-help actions have been or are being taken, A.I.D. will amend the grant agreement to include the scope and funding for Stage II, to be implemented in FY 1986/87. The type of inputs to be financed by A.I.D. under this stage would include: (a) additional interchange of KSU professors and administrators with Catholic University; (b) technical assistance in curriculum design, administration, and research programs; (c) faculty upgrading through short term training; and (d) acquisition of teaching aids, reference materials and texts. Tentatively, and subject to further study, an A.I.D. input of \$350,000 over three years is planned.

• Salesian Agricultural Institute (IAS) - This secondary agricultural technical school located 136 kilometers outside of Asunción has a student body of approximately 200, many from low income rural families. Despite resource constraints as a private school, it nevertheless has the reputation for producing some of the best middle level agricultural technicians in the country. In conjunction with its educational activities, it attempts to generate income from the productive use of its abundant lands, which at the same time serve for student training purposes. IAS has asked for A.I.D. help in making better use of its productive resources in order to assure an improved financial structure for financing the school. Because of the location and nature of the land base, there is an excellent opportunity to develop the agricultural activities of IAS to the point where they not only contribute better to the school's financial needs but also demonstrate sound land use management and resource conservation. The demonstration effect will not be limited to the school and its students, but will serve as a model for Paraguay. At the same time, needed improvements in curriculum and financial administration will be incorporated.

An A.I.D. input of \$400,000 over three years is contemplated. This A.I.D. contribution would help fill a gap being left by IDB which is concentrating its assistance to the State owned and operated agricultural technical schools to the detriment of the private sector schools. The A.I.D. financing will be through an Operational Program Grant (OPG) to the U.S. PVO, Salesian Society. The local office of the Inter-American Institute for Agricultural Cooperation (IICA), will prepare a detailed project implementation plan to be incorporated as part of the grant agreement. Annual performance targets will be specified. Obligations and/or disbursements will be tranched based on reviews of performance against the targets. The U.S. PVO will assist in the in-country supervision of the efforts of the IAS and in helping to identify sources of technical assistance and training. Its active participation will be encouraged to ease A.I.D.'s local project monitoring and financial administration role. For similar reasons, TDY services of A.I.D. specialists in agriculture and education will be requested from time to time to help review technical progress.

There are several advantages in working with the above organizations within the ADC program concepts. First, both are private sector entities and part of the Catholic Church, which represents a center of independent thought. Second, these organizations are considered to be the best available in their respective fields. With relatively modest A.I.D. inputs, they can become educational models that stimulate and encourage improvements throughout the educational system. Third, the development of in-country centers of excellence broadens the base of A.I.D. beneficiaries, particularly in the case of IAS, to lower income levels than the segment of the population that can be benefitted by A.I.D. participant training.

While no major expenditures are planned for activities with public sector education entities, opportunities for opening possibilities for a policy dialog with the public sector will be considered. One example is the interest under the Partner's Program in promoting a Future Farmers of America-type program in secondary agricultural education in Paraguay. A small A.I.D. input not only would mobilize a very active and capable Partner's effort but could enhance IDB/IICA efforts to improve curriculum. Another example is the Ministry of Education's interest in technical assistance for applied research and evaluation of its on-going efforts to expand its bilingual primary education. This offers opportunities for a possible research and development interest by S&T that can impact on the design of future World Bank education projects in Paraguay. A small amount of financing for invitational travel and short-term technical assistance would be required to maintain a working relationship with GOP authorities.

#### Private Sector Technology Transfer

• Agricultural Productivity Linkages - This activity will match technology needs of local private agriculturally based organizations and U.S. sources, such as Title XII entities and agribusiness. Needs will be identified through discussions with sector authorities, other donors and private sector organizations such as seed companies, cooperatives, and farmer associations. Sources will be located through the A.I.D. assisted networks developed under the Collaborative Research - Programs (CRSP's), cooperative agreements, and the International Agricultural Research Centers (IARC's). A plan of technology interchange through combination of site visits, short-term technical assistance, acquisition of technical materials and information will be developed based in the needs of each specific case. Only opportunities that demonstrate potential for a fairly quick replication and an ample spread of benefit incidence will be selected for A.I.D. financing. A prime example involves recent efforts to make local contacts and assist in developing relationship, for the S&T Sorghum/Millet CRSP with interested Paraguayan entities, including a local private seed company and the Mennonite farm community in the Chaco. By working with the private sector elements that have vested economic interests, only an initial injection of A.I.D. assistance will be necessary to establish a linkage that should be self-continuing. Costs will also be kept down by drawing on proven technologies already developed and readily available. Basic research will not be funded.

Areas of potential interest for Paraguay in which substantial A.I.D. financed research has been carried out, in addition to sorghum, include: soybeans (INTSOY) peanuts (CRSP); potatoes (CIP); casava (CIAT); integrated pest management; post harvest losses; food grain storage and marketing; soils management; wheat; and beans and cowpeas (CRSP). It is anticipated that each technology transfer effort would involve no more than \$40,000 of A.I.D. funds. The total amount of A.I.D. financing is estimated at \$250,000 over three years. Without having such funds available for cost sharing, it is very difficult to access these

central projects for services to Paraguay. In the initial year of the project, obligation of A.I.D. funds will be through limited scope grant agreements with various private sector organizations for each individual activity. At the same time, however, A.I.D. will attempt to locate and strengthen, with project funds, a suitable local private entity to serve as an umbrella organization for administering the individual technology transfer activities. Thus, obligations after the first year would be made through a global grant to a local private entity in the agricultural sector which in turn would administer the individual activities. This arrangement would not only facilitate A.I.D. administrative and project management responsibilities, but would help create a lasting institution in the private sector for promoting agricultural technology transfer.

- Micro-Enterprise Employment Generation - As in most LDC's Paraguay has an active informal small scale-business sector that has no access to institutional credit or technical assistance. These are the individually or family owned and operated micro-enterprises such as vendors, tailors, carpenters, mechanics, metalworkers, etc. Studies demonstrate that jobs can be created in this subsector at relatively low costs and that many of the businesses are women owned and operated. With increasing urban unemployment, there is great interest among the Paraguayan business community in developing mechanisms to assist their private enterprise counterparts that are currently outside the scope of existing support structures, e.g., the banking system. A series of recent meetings between representatives of the U.S. PVO Acción Internacional/AITEC and local businessmen demonstrated the applicability of the Acción Internacional/AITEC methodology to Paraguay's situation as well as the willingness of the business community to provide moral and financial support. This activity will be coordinated closely with Peace Corps which has a growing interest in promoting small scale productive ventures. It will also be coordinated with IDB, which has indicated an interest in financing the credit operations of such an organization. About \$200,000 of A.I.D. funds over three years are estimated necessary to cover the technical assistance costs of starting up the Accion Internacional/AITEC program in Paraguay.

- Technical Assistance for Private Enterprise - This activity will underwrite the start up of the U.S. PVO International Executive Service Corps (IESC) in Paraguay. With an A.I.D. matching grant, the IESC maintains an information network on retired U.S. executives and technical experts who can be accessed by local private enterprise for short term technical assistance. While these volunteers charge no salary, a portion of the airfare, per diem and administrative costs are passed on to the individual firms requesting IESC assistance. The A.I.D. funds will be used principally to help finance some of the local contribution required from private sector enterprises. Emphasis will be focussed on agro-industries, non-traditional exports, a marketing of small farmer production. Based on a precise identification of the needs of each requesting local enterprise, IESC goes through an intensive search to find a volunteer executive with the precise background and skills called for.

Each assignment results in a "hands-on" transfer of technology needed by the participating local enterprise that undoubtedly helps improve productivity, open new markets, reduce costs, or address some other crucial constraint. The A.I.D. funds will also be made available to help fund IESC assistance to business service organizations such as UIP, FEPRINCO, and the Chambers of Commerce. Such assistance will be directed at helping these organizations improve their service delivery capacity as well as become more effective in lobbying for appropriate GOP policies and measures.

Each use of A.I.D. funds will be subject to prior approval by A.I.D. In considering the eligibility of a private firm for A.I.D. cost-sharing, the benefit incidence spread will be carefully considered, e.g., utilization of unskilled labor or inputs produced by small farmers, production of goods needed by low income groups, generation of new employment opportunities through the opening of new markets, etc. Moreover, by assisting with covering the local contribution costs, it is expected that through the process of demonstration an ample number of IESC clients will be generated to warrant a long-term IESC presence in-country. Preliminary discussions with IESC indicate a willingness to transfer its Director in Chile to begin the program in Paraguay, provided that an early decision can be made to provide A.I.D. funding during the start up period. An A.I.D. commitment of \$300,000 spread over three years is recommended to bring about this transfer and to help provide the needed level of activity to warrant the establishment of a small office.

- Peace Corps Small Projects Activities (SPA) - This activity consists of the centrally funded annual grants to Peace Corps for promoting small scale productive activities by local communities. A.I.D. and Peace Corps have worked closely to assure sound operation of this activity. Given the good development impact of the program, it is proposed to increase the annual allocations under the ADC strategy to \$60,000 in FY 1986 and to \$80,000 in FY 1987, subject to achievement of planned administrative strengthening.

- Appropriate Technology Information - Because of Paraguay's small size, remoteness, and other factors, information dissemination appears to be a serious constraining factor in the development process. This is particularly true for capital savings or appropriate technology where a number of private sector entities such as universities, cooperatives, PVO's, etc. are attempting to develop their own responses to felt needs with extremely little access to information about successful efforts outside Paraguay. A needs assessment will be carried out to determine the nature of demand for appropriate technology information and the feasibility of improving the flow of such information to the country. The assessment will be coordinated with Peace Corps, USIA, and other potential users/collaborators. Assistance will be requested from A.I.D.'s Development Information Unit in designing the assessment and, if possible, funding it. It is estimated that approximately \$35,000 will be

necessary in FY 1985 to carry out the assessment. Depending on the results of the study, funds may be needed in FY 1986/87 to implement the recommendations.

The activities to be carried out under the Private Sector Technology Transfer component of the ADC program will establish close USG working relationships with a wide spectrum of Paraguayan private sector interests. They are designed to fill gaps left by other donors. In two cases, experienced U.S. PVO's will be involved in project execution, thereby reducing the administrative burden. A third activity (Small Project Assistance) involves the continuation of an on-going relationship with the Peace Corps for which the administrative arrangements and procedures have already been established. The Agricultural Productivity Linkages activity will require substantial A.I.D. administrative inputs initially and project implementation may have to be assisted through a project funded Paraguayan personal services contractor. The appropriate technology needs assessment will have to be contracted out to a capable entity.

#### Special A.I.D. Interests and Non Concessional Assistance

The third component of the ADC program will group those activities that come about because of a special interest by A.I.D. for which funding sources have been created or that represent non-concessional sources of assistance such as the Housing Guaranty program. A primary example is A.I.D.'s interest in promoting responsible family planning programs. The past negative GOP policy on family planning as part of its public health services is beginning to become more positive. In 1985 the Ministry of Health will begin offering outreach programs in natural family planning (Billings method). Recently, the GOP voted in favor of a new PAHO population policy that represented a more activist stance by PAHO in population. UNFPA has an active maternal-child health care program with the Ministry of Health and PAHO has added a fulltime consultant position of family planner to intensify its work with the Ministry. The GOP does not impede the work of private sector family planning clinics that operate throughout the country. Family planning devices are widely available, but costly, in the pharmacies. A reassessment of the strategy for promoting family planning services delivery is needed. The assessment will serve to help identify how best to draw on the centrally and regionally funded population and primary health care programs to support local initiatives and to reinforce positive GOP policy evolution. The assessment would also consider the options for increasing the cost-effectiveness and coverage of private sector delivery mechanisms. A social contraceptive marketing program, for example, if funded and managed through a central project warrants serious consideration given the lack of a public sector delivery capacity and Paraguay's extensive network of pharmacies and an established pharmaceutical industry.

Environmental problems are another area of concern in Paraguay where AID/W resources can be well utilized. Past A.I.D. support in coordination with an on-going Peace Corps program in Natural Resources/Forestry has assisted with the initiation of a biological inventory by the GOP. Paraguay remains to be one of the few places in the world lacking an extensive inventory of its highly diversified flora and fauna. Continued technical support of the joint Peace Corp/GOP efforts through the A.I.D./PC PASA and other centrally funded programs may be warranted depending on GOP self-help progress. Peace Corps is also promoting private sector participation in natural resources conservation/management activities that similarly warrant consideration of centrally funded A.I.D. support. A Country Environmental Profile (CEP) is expected to be completed for Paraguay by mid CY 1985, funded under an FY 1984 deob/reob action. Preliminary CEP findings indicate a critical need for improved data collection, maintenance, interpretation and dissemination for natural resources and economic management. Other priority needs, some of which may be suitable for other donor financing, include a national land use capability study, improved wildlife and wildlands management, institutional strengthening of private environmental groups in such aspects as environmental education methods, and in the regulation and monitoring of pesticide and toxic substance use together with related public education..

As the ADC program gets underway, its major private sector focus will generate better knowledge of activities in the Paraguayan private sector. In turn, this will likely enable identification of opportunities for the Trade and Development Program (TDP). Similarly, given the lack of other donor activity in the shelter sector, A.I.D.'s Housing Guaranty (HG) Program may be a very useful resource at some future time in the ADC program. However, before an HG can be considered a number of economic concerns about exchange risk and interest rate would have to be resolved. Even then, an HG would only be considered if it would be instrumental in obtaining innovations regarding the cost of the housing units, participation of the private sector and other needed reforms.

Women-in-development (WID) activities in Paraguay have been very limited. Peace Corps SPA as well as a small IICA program promotes improvements in home extension efforts of SEAG, the Ministry of Agriculture's extension service. The Partners Program supports training in home extension and family education in collaboration with other offices within the Ministry. A local PVO, Misión de Amistad, works with low income urban women in its community development efforts. Catholic Relief Services (CRS) also takes a whole family approach to its rural development activities and address the role of the woman in its health and nutrition activities. A local PVO, the Paraguayan League of Women Rights, provides legal and training to poor women and has received past A.I.D. assistance. The Colorado political party also maintains a women's aid organization. Unfortunately, the large number of activities with different sponsors tends to fractionalize WID efforts rather than promote

cohesion and a more coherent policy framework. Moreover, lack of awareness of discrimination and traditional attitudes about women's role still seem to be serious obstacles. The proposed micro-enterprise employment generation will provide an opportunity to collect data on the role of women in this subsector. In this connection, it would be interesting to look into the special needs of graduating women beneficiaries of the project into the formal credit channels, one of the basic objective of the project. Another potentially rich source of data is SEAG's farm administration activity in which detailed records are being maintained on over 500 small farm families. Assistance in the analysis of the data and improvement in the system would be beneficial in terms of bringing about better consideration of the role of rural women in the design of farm technology packages.

With respect to disaster preparedness, Paraguay's major natural hazard is flooding. OFDA is already collaborating with the UNDP in the development of an information system for anticipating flood levels. As the GOP implements the initial recommendations, needs for further institutional strengthening will arise. The maintenance of a small A.I.D. office under the ADC program will facilitate continued coordination with OFDA on future disaster preparedness efforts.

In order to have the flexibility to respond to opportunities and needs in the above areas of special A.I.D. interest, it would be necessary to have a small amount of PD&S funds for costs which cannot be readily covered by the cooperating AID/W offices or centrally funded programs. Such funds would cover the costs of short-term technical assistance, invitational travel to attend workshops and seminars, the preparation of studies and analyses, etc.



## FOOTNOTES

- 1/ World Bank Report No. 4751-PA Economic Memorandum on Paraguay, February 8, 1984.
- 2/ August 24, 1982 Airgram A-30, Paraguay's Troubled Rural Sector, A U.S. Mission Perspective.
- 3/ U.S. Embassy: Economic Trends Report - Paraguay, July, 1984; and Investment Climatic Statement for Paraguay, December 1984.
- 4/ World Bank Report No. 5043a - PA, Paraguay Agricultural Sector Study, June 29, 1984.
- 5/ Ibid
- 6/ Ibid
- 7/ Ibid
- 8/ Kohlnepp, Gerd. University of Turbingen, Paper on Problems of Dependent Regional Development in Eastern Paraguay
- 9/ World Bank Report No. 5145-PA, Paraguay: Issues and Options in the Energy Sector, October, 1984.
- 10/ Ibid
- 11/ World Bank Report No. 4751 - PA
- 12/ Inter-American Development Bank. Loan Proposal PR-0091, Second Stage of Expansion of Rural Public Health Services, October 1982.
- 13/ Ibid
- 14/ PAHO, 1985 Programa de Cooperación Técnica.
- 15/ World Bank Staff Appraisal Report No. 3380c-PA, Paraguay, Second Rural Water Supply and Sanitation Project, May 22, 1981.
- 16/ World Bank Staff Appraisal Report 4609 - PA, Paraguay, Second Vocational Training Project. November 29, 1983.
- 17/ Ahorros y Prestamos No. 17, November 84, publication of the National Housing Savings and Loan Bank.

# DRAFT

## Issues Paraguay

1. On page 2. of the ADC Strategy paper is a statement indicating that the rekindling of expectations by the GOP of the resumption of a traditional bilateral AID program is to be avoided. Then on page 27. "GOP connection through quick injections of short term TA or on-site visit to inspect a successful development activity elsewhere can help the adoption of needed GOP policy/program improvements. Is this not getting to close to rekindling?
2. When we speak of institution building do we mean the Host Country or other donors or both?
3. On page 4 paragraph 3. The total foreign debt is \$2,150?
4. On page 9. Forestry - Is the Mission aware of S&Ts Fragile Land Initiative?
5. Page 15. Indicated here only a third of the rural children complete six grades of primary school. How then can participation of the rural community be assured in the training programs?
6. IDB was funding IAS previously. What were the reasons for pulling out the funding?
7. Rationale for using the Catholic Church - Center of independent thought?

11/8